

Livermore (A. A.)

PHYSICAL EDUCATION;

A

LECTURE

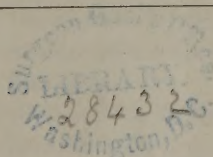
DELIVERED BEFORE THE

TEACHERS OF HAMILTON AND BUTLER CO. OHIO,

ON SEVERAL DIFFERENT OCCASIONS,

✓
By A. A. LIVERMORE.

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PHYSICAL EDUCATION

LECTURE

OF THE

PRINCIPLES AND PRACTICE

OF PHYSICAL EDUCATION

IN THE

UNIVERSITY OF

EDINBURGH

BY

JOHN

WATSON

OF THE

UNIVERSITY OF

EDINBURGH

IN THE

UNIVERSITY OF

EDINBURGH

PHYSICAL EDUCATION.

It is as convenient and just a division of human nature, as we can give, to call it a composition of physical, intellectual and moral powers. These are not discordant with one another, as some systems of philosophy and religion would represent, but harmonious. "God hath tempered the body together," part to part, sense to sense, and limb to limb, and He hath also tempered our whole nature together, body to soul and soul to body, and made one fearful and wonderful, breathing and active whole.

The soul is of course the most important part. It is most like God in whose image it is created. It is the master of the body, and says to it, Go, and it goeth; Come, and it cometh; and to my servant, Do this, and it doeth it. Its joys are the most intense, and its pains the most severe. It is the part not ill with the sickness of the body, not wounded by its cuts and bruises, not given to decay and death, but rising from the tomb immortal.

But because the soul is the most important, it does not follow by any means, that the body is not also of great value, else why did the benevolent Creator make it? and why does he lay levies upon all nature, upon corn, wheat, flesh, and water, to feed the flame of life, which like that of the bush of Horeb, seen by Moses, ever burns, but consumes not the body?

The intellectual and moral faculties are most intimately connected, and what harms or benefits one, harms or benefits the other. Ignorance and superstition walk hand in hand. "Keep thy heart with all diligence," said the wise man, "for out of it are the issues of life." But the heart, or moral nature, involves the intellect, and that in turn the body, in its fortunes, good or bad, and the body acts back again, through an ascending series from sensations to thoughts, thoughts to feelings, and from ideas to character and life.

"The body and mind," says Sterne, "are like a jerkin and its lining. If you rumple the one, you rumple the other." A good muscular development, a normal condition of the bodily functions, would no doubt, do much to keep the passions and appetites from becoming morbid, and craving forbidden pleasures, and save the whole man from lapsing into sensuality and vice. Vigorous exercise helps to keep every thing in its right place, both in body and mind. It is the stagnant pool that mantles over with a green coat, and exhales a noisome effluvia. A whole swarm of blue devils will buzz about the ears of my Lady Easy in her rocking chair, or of the pale student Sir Bookworm, the slave of the midnight lamp.

Now it has been said a hundred times before, and it must be said a hundred times again, THAT EDUCATION SHOULD BE AS COMPREHENSIVE AS OUR NATURE. It should be the mistress, nurse, and gymnast of the body as well as of the mind. For what it proposes to do, is to draw forth the faculties, to expand seeds into germs, germs into buds, leaves, flowers, and fruits, and to raise the jubilant song of "harvest home" over the collective man.

Though the intellectual and moral powers are therefore confessedly the important, regnant, and decisive guides, yet the body is not to be forgotten in our true system of education. For we hold the heavenly "treasure in an earthly vessel," and we must be careful not to fracture or break it, for no costly vase of porcelain, or Bohemian glass was ever

easier to mar, or harder to mend than this self-same body of ours. Once neglected, damaged, disordered, "its sweet bells jangled, out of tune," it can scarcely again be restored. Chronic diseases according to the designation can hardly be cured, though they may be alleviated, changed in their seat, or postponed in their final result. This exquisite harp of a thousand strings once put out of tune can with difficulty again achieve its perfect music.

What I propose to say then in the few remarks I have prepared for this occasion is upon the training of the body, or Physical Education, and its connection with mental and discipline.

For though man has lived six thousand years on this globe, he is still quite ill at ease, verdant and juvenile, verily "a stranger on earth." And he probably makes no more mistakes any where than he does in physics, in the apparently obvious, and most tangible part of his life. He does not eat well, or drink well, or breathe well, or sleep well, or exercise well. His body is still a savage, whatever is his mind; it has not been taught and tamed. These are not mere idle words of declamation, random censures, but criticisms sustained by the tables of vital statistics. Mankind do not live out but half their days, but die before their natural time comes. And though they breathe, they often can hardly be said to live;—they vegetate. Aside from those who are dying by inches on beds of protracted illness, worn to the bone by some chronic disease, how many carry about with them not a living, enjoying self, a body throbbing with the healthy pulses of vigor, but one only half alive. Not a limb, organ, sense, or function but what has its disease, and not one or two, but some of them half a dozen. More than one half of the human species die in childhood.

Even the poet Dryden, though he did not always "reck his own rede," had spelled out so much of physiological wisdom as this:

“ The first physicians by debauch were made,
Excess began, and Sloth sustains the trade ;
By chase our long lived fathers earned their food,
Toil strung the nerves, and purified the blood ;
But we their sons, a pampered race of men,
And dwindled down to three score years and ten ;
Better to hunt in fields for health unbought,
Than fee the doctor for a nauseous draught ;
The wise for cure on exercise depend ;
God never made his work for man to mend.

We need forsooth no new medicines. Our apothecary shops are already packed and crammed, every box and vial and shelf, from top to bottom, with antidotes to cure every conceivable disease. It is indeed one of the most wonderful manifestations of human skill and genius which we can visit on earth, is this self-same druggist's shop. Every land the sun shines upon has been explored, every department of nature ransacked, every element summoned into the service, every vegetable, mineral and animal has been compelled to yield up its secret, until we have a *materia medica* before us, to learn the bare nomenclature of which would require a respectably long life-time. But with these mighty fortresses of defense and remedy, planted at every corner and square in our city, with cannon, gun, pistol, revolver and minnie rifle, loaded, rammed, primed and cocked, to hit every ill and ail, in general and in special, the Great Reaper gathers in his harvest apace, undertakers get rich fast, physicians are counted by hundreds, and the people are still paler and sicklier, bronchial, consumptive, dyspeptic, rheumatic, hysteric and generally out of order and out of joint.

Dr. Ray of the Rhode Island State Asylum for the Insane in his Report of 1854, says, “ there never was a time when brains were more rapidly used up, as the phrase is, in one way or another, in consequence of the prolonged activity of the vital movements to which they are subjected. In the struggle for wealth, power, or distinction, or even for the privilege of living at all, success requires continuous atten-

tion, intense application, and a strain of all the faculties, to an extent that was once comparatively rare."

"This call must be answered, and many there be that break down under the unnatural task which it imposes."

"The disastrous result is usually precipitated by habits of living not calculated to restore the energies thus prodigally expended."

He specifies bad air, ill diet, and want of exercise, as among the chief violations of the laws of health, and predisposing causes of insanity. He adds that, "in no country in the world probably is so little account made of exercise among men of active minds as in ours."

Even the common salutation, "How do you do?" reveals our nervous anxiety about health. For this phrase is not, as a stranger might innocently suppose, any query as to how, or what one really *does*, but it is a health query, it smacks of pills and powders, and anxiously desires to know, how the individual under examination is able to make good this very doubtful battle of existence, and keep out of the doctor's hands and the undertaker's bills. There is too much of what a friend once called, "hospital talk" in society. "Are you *quite* well?" as if it were more than half probable that you did not know what a risk you were running in trying to live.

We have at least six different kinds of physicians in Cincinnati—Allopathic, Homeopathic, Eclectic, Botanic, Hydropathic and Mesmeric. But the bills of mortality go on as high as ever, and we meet with people who do not know what to believe in medicine, more than they do in theology, and who drift about as a ship without rudder or compass.

What I propose therefore to my friends, the teachers, now assembled, is not a new nostrum, or new school of practice, but to introduce into our Education a new health element, to PUT HYGIENE INTO OUR SCHOOLS, that thence it may flow forth, and bless society. The maxim of Prussia is a sound one, that whatever you wish should appear in the national character, you must put into the common schools of a coun-

try. Cast then a healing branch into these ever flowing fountains of our national life, and the streams will run pure.

There are several ways, in which teachers can render most valuable service to the cause of public health, and minister that precise ounce of prevention, that is worth a pound of cure.

First by example; they can present in their own persons a fine illustration of the true principles of physical life. They can by diet, exercise, study and cleanliness, attest the dignity of their vocation, and exhibit a model of the physique worthy of all acceptance and imitation. It is related of a well known teacher, that he once ordered Daniel Webster, when under his instruction, to go out and wash his hands, and the command no doubt did Daniel just as much good as it would any humbler lad. But the habit of tobacco chewing was not unknown even to the nicest gentleman of the old school. The teacher has it in his power to discountenance and discredit this disgusting and unwholesome habit, as well as that of snuff taking, cigar smoking and universal salivation without calomel. It devolves upon the teacher to be neat and cleanly in all things, and to verify the old Latin phrase, *homo factus ad unguem*, a man made to a finger nail, by showing the perfect gentleman even to the ends of his fingers, for that is the spot on which his ill-breeding sometimes sets its mark. The teacher can inculcate temperance by precept, and still more persuasively and beautifully by practice.

We can easily see how meanly we think of our intellectual pleasures, and how fondly we dote on our animal appetites, when we expend more millions by far upon cigars, than we do upon our common schools. The tobacco shops of our city probably outnumber the book-stores four fold, and the grog-shops well nigh a hundred fold. Our hotels are quite as imperial as our churches, and our steamboats outvie our colleges.

(The teacher can do much also in the school-room for the

health of the pupils, by attending to the subject of *their position in sitting, their carriage in walking, and their poise in standing*, so far as mechanical means favor the natural play and normal condition of the bodily organs. Many a bright scholar sinks into an invalid by very slight neglects of this description, such as stooping, or sitting badly, if combined with other violations of the laws of health.

The teacher can regulate to some extent that essential condition of Hygiene, *the air of the school-room*. I know a little girl, who in winter is often obliged to stay at home from school, because she takes cold easily from the sudden extremes of temperature, being at one time almost roasted, and at another almost frozen. These rapid transitions, as of a Russian bath, from the torrid to the frigid zone, and *vice versa* are not favorable either to health, study or quiet nerves. Every school-room ought to have a thermometer, and each teacher ought to be himself a living thermometer and barometer, in order to keep, as far as the infirmities of climate, human nature and ill-adjusted rooms will permit, a uniform temperature, both as to warmth and dryness. The diseases of the respiratory organs, and in some measure others, are either caused or aggravated by this alternate blowing hot and blowing cold.

Ventilation too as well as temperature is of immense consequence. We are plunged many miles deep in heaven's own double refined ether, and it is all the time pressing to enter our close and stived-up apartments, singing and shouting around the windows, knocking at the doors, shaking the blinds and shutters, and saying, "Let me come in, good folks, and I will do you the greatest benefit, give you a breath of pure and wholesome atmosphere, and plant roses on your cheeks and strawberries on your lips." But we refuse the advances of our boisterous friend, say, "Nay," to his promises, exclude Dr. Air and his fine zephyrs, and then manufacture a horrid effluvia of our own, that is sufficient to knock an ox down, if he should have the hardihood to put his honest face into one of our parlors, school rooms, or churches.

At present it is a very difficult matter to accomplish, to have sufficient change of air without too much draught. Many failures have been committed. Even the British Houses of Parliament, upon which great skill and expense were lavished, have been tried, and found wanting. Few, if any, rooms at present, can maintain a pure and elastic ether, like the outward air, during the presence of a large assembly for several hours. I have never yet seen this desideratum accomplished.

But by judicious opening of the doors and windows, by airing the room at recess and intermission, some opportunity may be afforded to save our children from the Black Hole atmosphere, to which they are too often condemned, and give heaven's own invigorating air to heaven's own cherished creatures.

The proper regulation of the *light* is also of great importance in a school room. The sunlight is full of blessing but it ought to come behind, and not before the pupils, and not fall directly upon the page they are reading or studying. They should also be taught and obliged to hold their book at a reasonable distance from the eye, else they become short sighted.

Then the teacher can encourage the pupils *to exercise in sports and plays*, when they are indisposed to do it; and oftentimes those most reluctant, the pale, studious, large-brained scholars, need it most. For if inclined to retain their seats, when the others go out, though it may be a very good indication of devotion to study, or show a flattering regard for their teacher, it is a very poor pledge of health. Nor have we found that those teachers who mingle to a proper extent in the sports and exercises of the play-ground, ever have occasion to repent of it on account of the diminished respect of the young, or the relaxed discipline of the school, but on the contrary good feeling and good blood are promoted on both sides, and the teacher himself gets what he so much needs—a whiff of pure air, and a freshened activity of body and mind. Orbilius, or wooden-spooned Squeers, or

Squcer's wife of brimstone memory, may think to preserve their dignity intact by hauteur and distance, but active children's natures will be sure to knead them over, and find out where their weak spot is, and then play upon it with a mischievous pertinacity, that will render it extremely hard for them to maintain a very perpendicular mien of importance.

Many plays, such as marbles, are of no service whatever in a gymnastic or hygienic point of view, but they rather encourage a gambling spirit. The best sports for children are those active exercises that send new and pure gushes of blood through the veins, and restore the jaded body with fresh jets of electric energy. The open air, the run, the jump, the halloo, the scuffle, the contest for speed or strength, seem as natural to children as water to fishes, or air to birds. The noise of a neighboring school-yard is often annoying to residents near by, but to one who remembers his own youth, and who loves to see the lambs and calves leap and frisk in the fields, and the birds dart from tree to tree, and from bush to bush, singing and flying, flying and singing, it is a very much more agreeable sight to witness the active and wide-awake crowd, running, jumping, rolling, wrestling, laughing, frolicking, than to see Dr. Blimber and his melancholy pupils walking out to take the fresh air in solemn procession, two and two, with a teacher before and a teacher behind, as if they were going to the grave to bury some friend.

But the basis of all sound physical education, practically viewed, is *the study of Physiology in our schools*, both public and private. I am most happy to be able to say to the teachers here assembled, that this study is rapidly extending, as I have learned from a gentleman who has visited in an educational capacity more than half of the states and territories of this Union. He states that works upon Physiology, Anatomy, and Hygiene are introduced more and more into schools, that larger classes are formed, and that the study is commenced at an earlier age than formerly. He says however that it depends very much upon teachers and their interest, whether this study is entered upon, and whether it is

made interesting or not. The community look to the educators to take the lead in this matter as in others pertaining to schools. It is also his opinion, upon which great reliance may be placed, that hitherto teachers have generally preferred the exact sciences and the languages to the natural sciences, and that therefore they have been less inclined to introduce Physiology into schools, and to form classes to study it. But what branch can be more interesting than that which concerns "the house we live in," this breathing, animate corporation,—its fearful and wonderful make,—its parts, joints, muscles, nerves, limbs, functions, and what study can be better fitted to awaken a true regard to the science of Hygiene than the knowledge thus acquired? It is a most curious and instructive fact on this subject, that while professorships are endowed in our medical colleges for every conceivable department and form of disease and function of the body, that the art of preserving health receives little or no attention, and has no distinct foundations, lectures or teachers. Rightly viewed, a physician should be a preserver of health even more than a curer of disease. He should be retained to keep the family well, rather than to heal them, when they may by neglect or mismanagement, have made themselves sick, and perhaps put themselves already beyond all help.

Let the physicians and surgeons give popular lectures on the art of preserving health and life, and curing diseases, and healing wounds, and the community could well afford as a matter of economy to remunerate them generously for such important information.

Let the human body and its functions, let Hygiene and health become familiar topics in schools, and a new leaf would be turned over in medical practice. Mankind would learn to avoid much of the present quackery, whether of regulars or irregulars, and knowing how to manage their own cases better than at present, they would escape many of those occasions to disease into which they now fall by ignorance, or carelessness. Every man may not be his own physician, for physicians themselves call in foreign aid in the sickness

of themselves or their families, but every man may know enough to forestall disease, and by a dexterous twist of the rudder, avoid a collision otherwise unavoidable with the breakers of death.

The schools in Prussia we are told have placards pasted upon the walls, giving many simple but important directions of health or cure. As for example, what is to be done instantly for a burn, before a physician could be called; what will restore a drowned person; what will arrest the bleeding of a ruptured artery; what should be done at once when a limb is broken, and how the person should be removed; what will restore a person who has fainted; or been struck with lightning; or who has taken poison; or who has been bitten by a poisonous snake, or stung by some insect. It would give an agreeable variety and vivacity to the monotony of the school exercises, if such topics were once in a while introduced by the teacher, and the simple information that could be given in five minutes might prove valuable on many occasions in saving human life.

But what is imperatively needed, in addition to the study of Physiology, to qualify our pupils to preserve their health, is *the practice of Gymnastics*. This art of exercise was well known, and faithfully used by the ancient Greeks and Romans, as a part of the regular training of their children and youth; and we cannot avoid the conclusion, that in this respect the modern Christian nations are far behind their Pagan progenitors. The Greeks were renowned for beauty, and their Apollo and Venus are the models of the world. The Romans were as remarkable for their strength, and their eagles flew victorious over every battle-field. The paramount object indeed of the ancient gymnastics, was to train up able and enduring soldiers for war, or prepare the combatants for the great games, or at a later period, to strengthen the gladiators for the terrible combats of the amphitheatre. But the citizen, the philosopher, or the artist shared in the advantages common to so thorough and universal a system of physical education. Socrates had a

brighter wit for his dialogues, and Cicero a fuller roll to his eloquence from the same cause that gave Leonidas and his Three Hundred their mighty energy in fight, and that crowned Caesar the hero of a hundred victories. This greater strength and beauty of body were but outward signs of that inward virtue, which oxygenated a purer blood for the brain, and energized a clearer and readier capacity of thought and will in the soul itself. In the Crito of Plato, Socrates puts it in the mouth of his country to say: "Did not the laws, ordained on this point, enjoin rightly in requiring your father to instruct you in music and gymnastic exercises?" He replies, "I should say rightly."

In the Middle Ages the institutions of chivalry, sports and tournaments, and in England the old manly games, and hunting and angling have done something for the practice of invigorating, out-of-door exercises; but in latter days there has been a great decline of active plays and games, and the present generation are suffering very seriously from this cause. A latent prejudice too lies against the Gymnastic art, as too abrupt and artificial for the purposes of health, as designed to prepare bullies and prize-fighters for their bloody conflicts, just as the games of Greece and Rome gave nerve and sinew to the warrior and gladiator, and armed the Phalanx and the Legion with their invincible power. But in more peaceful and Christian times we should learn the true value of such a training, as fitted to qualify men and women for the arduous duties and the heavy burdens of life, to give them the first indispensable condition to all happiness and usefulness, a sound and vigorous body, fully developed, beautifully proportioned, armed *cap-a-pie* against the assaults of disease, strung with a high-toned energy, pulsing with a pure, fresh life-blood, exempt from morbid secretions, and disordered appetites and passions, and doing the office and service of a body as God intended; a normal manhood and womanhood.

We feel the most assured confidence that very many diseases might be prevented by raising the bodily vigor a

few degrees higher, and thus enabling the constitution to weather many of those critical periods, when it is exposed the most to such attacks. Not the medicines, but the patient requires to be made stronger, and then his illness already relaxes its hold. Coughs and colds become at last painful and dangerous inflammations, but at first they are rather weaknesses, and may be occasioned, as the sagacious Franklin long ago suggested, by too much food and drink being taken into the system, and too little exercise being employed to digest them and carry them off. The wheels may be oiled so much as not to run easily. Too much fuel on the fire, or too much food on the stomach, which is, according to Liebig, a species of cooking-stove of the body, in connection with the lungs and heart, may extinguish all the animal heat and life.

Gymnastics for boys and Callisthenics for girls are necessary to give a full and harmonious development to the growing tissues of the body, as much as the regular drill of study to discipline and unfold the capacities of the mind. Thus it might be said very plausibly, that intellectual training was needless, because the mind must necessarily think, that to think is its nature; but why require it to study, which it does not like to do, but on the contrary it esteems mathematics and grammar as very bitter pills? Why go against nature, and create an artificial system? Because mere nature is not enough, but nature and art together help to form the perfect man. Because it has been found by ages of experience that study is good, that it gives a higher benefit than mere random thinking; because a regular, consecutive application is found essential to the full expansion of the intellectual muscles, and the enlargement and perfection of the whole frame-work of the spiritual being. We do not stop therefore to ask little boys and girls, whether they like their *a b c's*, and the multiplication table, but we put them through those useful mental gymnastics, will they, nill they, knowing that the process however distasteful at the time is a good one, and that the day is coming when they will be most thankful for the effort required of them to over-

come their *vim inertie*, so that, at last they will be able to perform all the mental operations with ease and delight. It is precisely so in the matter of Gymnastics. Because a lad does not like to exercise, but to sit still in the house and read his book, it is no good reason why he should be allowed to have his own way; on the contrary, the very fact that he does not like to exercise his limbs in athletic sports and games only shows the more conclusively his need of it, and it should itself excite alarm, as indicating that he is already becoming morbid in health and tone of body, and sinking into chronic disease. For when the animal ceases to run and play, we well know that it is either ill or old.

It is infinitely better of course, that all we do, we should do *con amore*, whether it be to think, act, or exercise; work itself is best when it becomes a species of play; but we must think, study and exercise, whether it is agreeable or not. If our book is not a pleasant pastime, then all the more must it be taken as a necessary medicine. If we reluct at taking exercise, then we must do it, as Dr. Johnson prescribed writing, "doggedly." No matter how dully the poor invalid may drag one foot after another, treadmill-like, for he is on the royal road to health, if he will only keep on far and fast enough in the way in which he should go. For every step presses a new tide of blood from the great central organs to the extremities, and overspreads and penetrates the entire system with fresh importations of strength and vivacity. Let the poor student, half dead with poring over his books, get up, and spend twenty or thirty minutes in vigorous and various movements of the arms, legs, feet and trunk, and he will already gain so much more quickness of mind, that he will be more than compensated for the loss of time. When coming to the Western country, I made inquiry of a distinguished physician of Boston relative to the laws of health for an invalid minister; his reply was, "Walk from five to ten miles every day, and take a frolic occasionally." The walking was for exercise, and the frolic was to throw off that

incubus of heavy care and low spirits, which mental pursuits and moral responsibilities of a weighty kind, such as teachers and preachers sustain, tend to create. I have not always followed the prescription, but so far as I have, I am ready to pronounce it a good one both for you and me.

Nor let it be objected, that there is no time to take exercise. There is always time to do all we ought to do. And if we would take more time in walking, gymnasticising and breathing the pure air of heaven, we should be condemned to take less time in being sick and miserable and useless. Sick-ness is the enforced vacation, which man, driving the wheels of business or study with headlong speed, would not take of his own accord, but which he is at last compelled to take in a way and at a time least agreeable to him. As much better as a sharp razor is than a dull one for shaving, is a high-toned and wide-awake mind in a strong and healthy body for thinking, than a sleepy and enfeebled one.

It is vain, also, to say, as many do, if exercise is so important, let children and youth work rather than play the ridiculous monkey tricks of callisthenics and gymnastics. But we, as teachers, preachers, pupils, merchants, have no corn to plant and hoe, no wheat to sow and reap, no potatoes to dig,—we wish we had some of these creature comforts, at least during the present high price current,—so we must do the next best thing to working, viz: beat away the blue devils and the black devils that hover around poor mortals, by vigorous jerks and movements of hands and arms and legs through the aid of rods, Indian clubs and dumb bells. Even the monkey can teach us the benefits of exercise, as he skips from tree-top to tree-top, and pokes fun generally at his heavy-gaited cousins of human kind.

There may be too much study, but the more common case is, that there is too little bodily exercise. A physician in this city was called to visit a young man who was seized with a sudden fit of trembling, without any sufficient apparent cause. It was soon ascertained that the patient was attend-

ing the high school, taking no exercise, never going out to play with the other scholars, studying at home early and late, and wholly buried in his books. The case was simply one of over-wrought brain and nervous cords, and the prescription for cure was as simple—Give up school and books, and exercise the muscular system.

The *Daily Times*, not long since, had the following paragraph in its columns: "The School Committee of Boston have recently rescinded a regulation allowing the assignment of lessons for study out of school, in the grammar school for girls. It appears that this action was taken at the instance of the city physician, Dr. Clark, who, after giving his attention to the subject, had become convinced of the alarming consequences growing out of such studies. The system of cramming the young brain, keeping up an unremitting pressure during and out of school hours, as is too often the case, is pernicious in the extreme—nay, it is wicked and suicidal. The evil is not confined to Boston; we see its effects in our own city. Cases of broken constitutions, insanity and death, we doubt not, could be cited, resulting entirely from this system of cramming."

At present we often educate in our high schools, academies and colleges, the intellectual faculties at the expense of health and life. We make brilliant mathematicians, and miserable dyspeptics; fine linguists, and bronchial throats; good writers and narrow chests; high foreheads and pale complexions; smart scholars, but not that union which the ancients praised so highly of a sound mind in a sound body. The brain becomes the chief working muscle of the system. We refine and re-refine the intellectual powers down to a diamond point and brilliancy, as if they were the sole, or the reigning faculties, and we had not a physical nature binding us to the earth on which we dwell for a season, and a spiritual nature uniting us to the great heavens, and the greater God who inhabits them, and with whom we are to dwell for ever. The students from the Military Academy of West Point are gra-

duated with broad chests, and finely developed frames, while those from our literary and scientific colleges, Harvard, Yale, Princeton or Oxford come forth pale, thin and cadaverous; refined, intellectual and interesting invalids, upon whom, if they become ministers of the Gospel, parishes are obliged to expend a vast quantity of complimentary sympathy, but they are not hardy soldiers for life's battle, armed and equipped as the law of their nature prescribes, and as their duties peremptorily demand. Thus the universities become a sort of splendid hospitals; with this difference that the hospitals cure, and the universities create, disease. Most of them are justly indictable at the bar of public opinion for taking the finest young brain and blood of the community, and after working upon them for four years returning them to the owners, skilled indeed to perform certain linguistic and mathematical dexterities, but very much below par in health and endurance, and, in short, seriously damaged and used up, physically demoralized. How can wise and good men, the presidents, professors, and tutors, of these institutions see all these things going on from year to year, and never lift a finger to set in operation the means of an effectual reform? It can only be accounted for on the ground of the inveteracy of habit. They do as their fathers did before them. Dost read Greek, thou learned L. L. D.? Then should'st thou long ago have imbibed as much wisdom as this, that a college without a gymnasium is by its very construction educating the mind at the expense of the body, and blighting the cause of learning, science, and religion, by making its torch-bearers to the world a timid set of half grown chronic invalids, who do not on average live out half of their days, and who only half live while they do live.

Hon. George S. Hillard states, that of the students who are graduated from Harvard College, one quarter lose their health, or have it seriously impaired, during their collegiate course!

No; this system of physical demoralization ought not to be allowed to proceed any farther, but to yield to the science

of a better age, and to the lessons of old history. And all great and good reforms seem to begin at the substratum of society, and work upwards. What precisely can be done for Physical Education will depend much on the disposition, capacity and fidelity of each teacher to do his part, or her part, to constitute himself a committee of one, the most formidable of all committees, and see what can be done. This is a subject which requires conversion as much as religion itself; a strong sense of the wrong doing of the past, and impulse and resolve to do better in time to come. A great work is to be done on this branch of education, and I look to see it undertaken by the common school teachers, and then it will finally reach every class and condition in the land.

In 1853, sixty-eight physicians of note in Scotland, drew up a paper and signed it, recommending to the proper authorities, the introduction into the public schools of the subjects of Physiology and Hygiene. Such is the demand of the times both in the Old World and the New.

Perhaps the system of Mr. Crandal, of New York,* now deceased, is the true one, to have fewer hours passed in school, and to connect with each school room a good system of ventilation, and a gymnasium. But at all events we can rely confidently upon the fact that the present system is a bad one for both mind and body, and that students pore over their books too many hours in a day, and that sedentary persons become morbid and low spirited from too little muscular

*Mr. William L. Crandal has published a very spicy and interesting book, entitled "Three Hours School a Day; a Talk with Parents." Albany, N. Y., pp. 264. He argues that the present system of Six Hours School a Day kills the body and kills the mind; that it interferes with growth, which is the proper business of childhood; that it is a thing of fashion and custom, not of science; that Nature takes her revenge by the irregularity of school attendance; that the present system may truly be denominated "*The Murder of the Innocents*," that it violates the laws of air and exercise, and the principles of the mind and moral nature; that the school-room becomes a prison of the worst kind; that it disgusts children with school and with study and people at large with the acquisition of knowledge; that it prevents the attainment of skill in the manual arts, which should go on at the same time with mental

exertion. Diseases of all kinds will continue to thrive apace, when we do so little to keep up the health at the maximum point, and to live a correct animal, as we try to do, a correct mental and moral, life.

And not only professional men, merchants, and women, would be benefitted by a gymnastic training, but even the laboring classes would be enabled by this means to work more easily, to defend themselves against illness, and to purchase exemption from that craving for spirituous drinks, and those forbidden pleasures, which haunts the mere tired drudge of toil. Were farmers and mechanics drilled when young, they would learn to avoid those ill habits in walking, or working, such as stooping, or standing awry, by which the body is shorn of its natural beauty and strength, and they are rendered less competent to perform the heavy task-work assigned them. The toilsman often procures great strength in one limb, but it is done by a loss elsewhere. The blacksmith has an arm of Hercules, but a leg slender as that of a Parisian dandy. The seamstress with her endless stitch, stitch, stitch, has a finger like wire, but her chest sounds hollow with a consumptive cough. It is the office of gymnastics to keep the whole machinery in fine running order, and to maintain the equilibrium of the whole by a just development.

We say then to the teachers, study Physiology and Hygiene, and practice Gymnastics, and what you do yourselves, make your pupils do likewise. Play alone, or work alone, does not develop the whole man. But a scientific course of exercises, such as those formerly given by an intelligent mem-

discipline; that it makes teaching "a laborious and physically prostrating occupation," and reduces the energy of the Teachers so as to prevent their being bright, witty, and amiable, which are necessary conditions for success in their art.

Whereas, he contends that the advantages of Three Hours School a Day would be, that both pupils and teachers would enjoy better health, would obey the natural laws, breathe purer air, have better digestion; that children could then have time to learn some manual employment; that school attendance would be punctual and regular; the perceptive and reflective faculties would have a joint and natural development; and a generation of healthy men and women would be produced, instead of the present miserable invalids.

ber of your own body, Mr. C. E. Langdon, will effect the object without a great outlay of expense for apparatus. The muscular movements are so simple that a child can learn them, and so complete that they leave no part of the physical system unexercised.

Procure a manual, a rod, and a simple pair of turned clubs, and you will drive away more diseases, and scatter more vapors of low spirits than a whole cortege of physicians could dissipate by their drugs. The free exercises, or athletic movements of the body without apparatus, invented by Dr. Ling, a philanthropic physician of Sweden, who died in 1839, have been adopted with much success in the hospitals of Europe, and also in the armies, as a drill for the soldiers.

But I have already detained you too long. In conclusion, let me exhort you never to forget the grandeur, and the beauty of the work you are now engaged in as teachers of the young. Keep the lamp of your zeal trimmed and burning. Despise not one of these little children, however poor, or humble, or ignorant, or vicious, or disagreeable, for I say unto you, "their angels do always behold the face of our Father which is in heaven." They may be jewels picked out of the mud, but they are jewels still, and it is your duty to polish them, and make them shine, and set them in the heavenly crown. Other men work long and hard on canvas, stone, iron, and brass, and do a great thing when they make an Apollo, a Venus, or a Golden Wedding, (a picture,) or a Steam Fire Engine. But it is your sublime and holy office to work upon the workman himself, to fashion the immortal soul to shapely proportions, to quicken it with love, to inform it with wisdom, to dye it with colors more lasting and beautiful than those of the rainbow, and to clothe it with virtues and graces that will glow with unfading brightness when the stars of heaven are no more.

The body indeed is but the frame in which this picture of the soul is set, but as Alexander the Great kept the Iliad of Homer in a rich casket, out of admiration for the poem, so

will the true educator honor the mind and spirit so much, that he will also honor the body in which it is framed and set for its exhibition in this world.

In speaking thus highly of the benefits of physical education, you will not, of course, mistake me so much as to suppose that I would not assign the front rank in the task you have to perform to that moral and religious training, by which you will not only make your pupils good scholars in earthly knowledge, and good citizens in the State, but by which you will render them worthy children of the Heavenly Father, and true disciples of the Heavenly Saviour.

And in this glorious art you can help one another by mutual conference and sympathy, by Teachers' Associations and Institutes, by Normal Schools, and friendly co-operation. Here, as in all human affairs, it is good for soul to meet soul, and eye to look to eye, and hand and heart to unite together; for in the multitude of counsellors there is safety, and in the fellowship of friends and brethren we become wise with the wisdom, and strong with the faith, hope, and love of a hundred hearts.

NOTE.—The preceding Address was delivered at Glendale, Ohio, March 24th, 1855; Cincinnati, April 21st, 1855; Newtown, May 18th, 1855; Oxford, July 31st, 1855.

